# THE VETERINARY RECORD

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## Erysipelothrix Rhusiopathiæ Associated with Disease in Ducks

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AND
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The causal organism of swine erysipelas was isolated from a turkey by Jarosch in 1904 and this seems to be the first record of *Erysipelothrix rhusiopathiae* infection in domestic fowl. During the years 1909 to 1911 there were three records of the isolation of the organism from fowls and in 1921 Eber obtained it in pure culture from two ducks and a turkey. Scholl and Jacquart (1926) also described infection of fowls and ducks and stated that serum was beneficial in fowls affected with the disease. A discussion of these recorded cases will be found in the textbook of van Heelsbergen (1929) and in a paper by Schmidt-Hoensdorf (1931). The latter author described an epidemic in a flock of hens in which the source of infection was considered to be infected pigs. He also recorded fatal infection of three birds in a zoological garden contracted from mice which infested the bird house and were dying in large numbers from a spontaneous infection with *Erysipelothrix rhusiopathiae*.

In the United States the first record of infection of turkeys by Beaudette and Hudson in 1936 attracted considerable attention and since that time there have been a number of further papers on the disease in this species. Infection of turkeys with *Erysipelothrix rhusiopathiae* has become an important problem and the Special Committee on Poultry Diseases appointed by the American Veterinary Medical Association reported in 1939 that in view of the continuation of outbreaks and the spread of the disease to several states an attempt should be made to determine the source of the infection.

In 1939 Graham *et alia* described a serious epidemic among ducks on a very large poultry farm in the United States. Within a period of four months it was estimated that between 1,000 and 1,200 birds died, as many as 30-40 ducks dying within an hour. We are not aware of any records of infection of ducks with *Erysipelothrix rhusiopathiae* in this country.

### DESCRIPTION OF OUTBREAK

Early in November, 1941, an outbreak of disease occurred in a flock of 54 Khaki Campbell ducks on a farm in Maidenhead. The flock comprised six birds between 3 and 4 years old, 20 ducks hatched in 1940 and the remaining birds hatched in 1941. The following is a brief description of affected ducks in the order in which the cases occurred.

*Cases 1—5* comprised four birds aged 3-7 months and one 3-months-old bird. These birds showed ruffled feathers, appeared as if soaked in perspiration, became lame and died within 24 to 72 hours of showing symptoms. An autopsy of Case 5 at the farm showed no macroscopic changes, apart from a swollen foot.

*Case 6* was a 7 months drake which died and was sent to the laboratory and examined by one of us (E.G.W.). The findings were as follows:—

Young Khaki Campbell male duck examined 48 hours after being picked up dead. Carcase emaciated, crop full of food. Approximately 1 c.c. straw-coloured, clear fluid in pericardial sac and similar fluid in connective tissue over pleural surface of sternum. All internal organs congested. Subepicardial ecchymoses. Liver and spleen normal. Lungs congested and oedematous and some bronchi contained yellowish cheesy material. No organisms seen in smears of heart blood.

Cultures of liver and heart blood gave a pure growth of *Erysipelothrix rhusiopathiae* with the following characters:—

Surface blood agar plates from liver and heart blood showed after 24 hours a pure growth of pin-point-sized translucent colonies which failed to show any marked increase in size on further incubation. The organisms were delicate Gram-positive rods which were non-acid-fast and non-motile. Rough colonies were not seen. After 72 hours there was a narrow zone of alpha haemolysis. Serum broth cultures showed a turbidity and a fine deposit. A typical "test tube brush" growth developed in gelatin stab culture after five days at 18° C.; the gelatin was not liquefied.

The organism produced acid but no gas in lactose and glucose in 2-4 days and was without effect on mannite, sucrose and salicin. The culture isolated from the liver produced a little acid in maltose after 8 days. (The strain of *Erysipelothrix rhusiopathiae* isolated from ducks by Graham *et alia* (1939) did not ferment glucose or lactose and produced no haemolysis on blood agar).

Two mice given 0·5 c.c. of a 48-hour broth culture intraperitoneally died four and five days after receiving the injection, having shown a purulent conjunctivitis during the 24 hours preceding death. The organism was seen in smears of spleen and heart blood and was isolated in pure culture from both sites.

Protection experiments using a commercial swine erysipelas immune serum were carried out on mice, which were given 0·2 c.c. of a 48-hour broth culture (third sub-culture) intraperitoneally. Three mice received 1 c.c. of serum intraperitoneally one hour before the culture and were alive and well 15 days later. Three mice which were not given serum were all dead within four days, having shown a purulent conjunctivitis as early as 24 hours after receiving the dose of culture. *Erysipelothrix rhusiopathiae* was recovered from all three mice at autopsy.

The same serum was used for an agglutination test with the organism, using as control the stock strain of *Erysipelothrix rhusiopathiae*. Both organisms were grown for five days on large agar slopes on which the growth appeared as a fine film. The growth was washed off with saline and killed with 0·25 per cent. formalin at 37° C. for 24 hours. Both organisms were agglutinated by the serum at a titre of 1 in 640. After four hours in a water bath at 56° C. there was only slight agglutination in dilutions of 1 in 10 and 1 in 20 and there was only partial clearing in these tubes after a further 18 hours at 37° C. The higher dilutions showed complete agglutination after the first four hours.

The characters of the strain of *Erysipelothrix rhusiopathiae* described above are very similar to those of the organism isolated by Greener (1939) from a peacock except that the latter appeared to be more virulent for mice.

*Case 7.*—A 5-months-old duck became lame, the feathers were ruffled and the bird developed an ovoid swelling about the size of a walnut over the dorsum of the left foot. The swelling appeared to originate in the metatarso-phalangeal joints; it was hot, did not fluctuate, and no material was obtained on attempting aspiration. On incising the enlargement a small amount of blood-stained fluid exuded but there was no pus. Two doses of 2 c.c. soluble M & B 693 were given into the breast muscles at an interval of 24 hours. After a period of 24 hours during which the bird appeared extremely ill and sweated profusely there was considerable improvement and the duck became normal, apart from some reluctance to use the affected leg.

*Case 8.*—A 7-months-old drake developed an ovoid swelling on the dorsum of the left foot and went lame. M & B 693 was given as in Case 7 and the bird's condition improved. The report of the bacteriological examination of Case 6 was now available and Cases 7 and 8 were given 2 c.c. of a commercial swine erysipelas immune serum intramuscularly. Case 7 improved still further and began to put on weight; the lameness persisted for a time, but appeared to be due mainly to the surgical interference. Case 8 also showed marked improvement within four days of receiving serum. The foot swelling became less hot and diminished in size and the local infection seemed to be confined to a small dark

area over the medial aspect of the site of the original swelling. Within eleven days of receiving serum treatment the bird was rapidly gaining weight.

*Case 9.*—A 6 months drake became lame five days previously and showed a swelling of the first interphalangeal joint of the middle phalanx of the right foot. The swelling was roughly circular, the size of a green pea and firm. Two doses of 2 c.c. of serum were given at an interval of 24 hours. The swelling became hard, showed a central depression and eventually exuded a cheesy material. There was a small amount of exudate for the next ten days but the bird's general condition was excellent.

*Case 10.*—A 6 months drake showed two pea-sized swellings on the proximal and distal interphalangeal joints of the medial digit of the right foot. Serum was given as in Case 9 and there was rapid healing of the local lesion after a slight purulent discharge lasting a few days.

*Cases 11—13.*—Three ducks became lame and were given a single dose of 5 c.c. of serum. All recovered completely and are now laying.

*Cases 14—16.*—Three drakes became lame, quickly lost weight, but on treatment with 5 c.c. of serum, at one dose, the general symptoms subsided rapidly and the lameness slowly disappeared. The birds are now healthy.

## Discussion

Of the 54 ducks in the flock, 16 became affected and six of them died. The other birds affected all showed lameness and recovered after treatment with one or two doses of commercial swine erysipelas immune serum; two of these birds received M & B 693 in addition. Lame birds became normal within 2-4 weeks of receiving serum. There have been no deaths since the institution of treatment. Until August, 1941, the birds were giving an average egg yield of 290 eggs per year but from that time until the end of December, 1941, not a single egg was laid. The hygienic conditions under which the birds are kept are excellent and the ground was dry during the summer and autumn although it is subject to periodic flooding every spring. The birds were not at any time in contact with pigs or sheep.

*Lesions.*—The lesions described in turkeys in the U.S. comprise changes in the small intestine varying in severity from mere congestion to haemorrhagic enteritis, subepicardial haemorrhages, serous or sero-fibrinous effusion in the pericardial sac and haemorrhages into the femoral and pectoral muscles. The last are considered characteristic of *Erysipelothrix rhusiopathiae* infection in turkeys and of diagnostic importance. In one of the turkeys examined by Beaudette and Hudson (1936) there was swelling of the tibio-metatarsal joint. In the outbreak in ducks investigated by Graham *et alia* (1939) the lesions in most of the 140 birds examined at the laboratory were those of a septicaemia, but the authors state (p. 214): "One group of half-grown ducks showed dark congested areas in the webs of the feet, and the femoro-tibial articulations of some of the ducks appeared chronically enlarged."

In the bird examined *post-mortem* at this laboratory there was no evidence of enteritis or of haemorrhage in the pectoral muscles; the femoral musculature was not examined.

*Sources of Natural Infection.*—In some cases the source of infection has been considered to be pigs affected with swine erysipelas but the evidence on which this opinion is based is far from convincing. The Special Committee on Poultry Diseases set up by the American Veterinary Medical Association suggested sheep polyarthritis and fish meal as possible sources. In the three outbreaks in turkeys described by Rosenwald and Dickinson (1939) in the U.S. there was no contact with pigs and no cases of polyarthritis in sheep had been reported in the vicinity. A further possibility is infection of birds from mice, an example of this being that given by Schmidt-Hoensdorf (1931) in a bird house in a zoological garden.

Various authors have suggested environmental factors as predisposing causes. Outbreaks are more common in birds during the early winter months, often when they are on wet muddy ground and kept under bad hygienic conditions, especially overcrowding.

*Use of Serum in Birds.*—Praff (1921) described a chronic form of *Erysipelothrix rhusiopathiae* infection of fowls and suggested that serum might be tried in poultry. Graham *et alia* (1939) tried serum on a large scale in the outbreak in ducks but were unable to demonstrate any beneficial effect with doses of 2·5 to 6 c.c. using large groups of control and serum-treated birds in the natural outbreak.

The experience of one of us (F. A. H.) who used serum in the small outbreak here recorded suggests that it was a very valuable measure and resulted in recovery and rapid improvement in bodily condition in birds which appeared extremely ill when treated.

## Summary

A disease in ducks is described in which *Erysipelothrix rhusiopathiae* was isolated in pure culture from the organs of a bird which died. A number of birds developed swelling of leg joints which improved following the use of immune serum.

*Appreciations.*—We wish to note the appreciation due to Dr. R. F. Montgomerie, of the Wellcome Research Institute, for the supply of serum, and to T. N. C. Mumby, Esq., on whose farm facilities were afforded us for investigation and treatment.

## References

Beaudette, F. R. and Hudson, C. B. (1936.) *J. Amer. vet. med. Assoc.* **88**. 475-488.

Graham, R., Levine, N. D. and Hester, H. R. (1939.) *J. Amer. vet. med. Assoc.* **95**. 211-216.

Greener, Averill, W. (1939.) *Brit. J. Derm. & Syph.* **51**. 372-376.

van Heelsbergen, T. (1929.) Handbuch der Geflügelkrankheiten und der Geflügelzucht, Stuttgart.

Pfaff, Fr. (1921.) *Z. InfektKr. Haust.* **22**. 293-298.

Rosenwald, A. S. and Dickinson, E. M. (1939.) *Cornell Vet.* **29**. 61-67.

Schmidt-Hoensdorf, F. (1931.) *Deuts. tierärztl. Wschr.* **39**. 196-198.

———. (1939.) Report of Special Committee on Poultry Diseases (A.V.M.A.). *J. Amer. vet. med. Assoc.* **94**. 311-313; abstr. *Vet. Bull.* (1939.) **9**. 869.

## One Hundred Years Ago

*From the Veterinarian, Vol.* 15, 1842

A committee of veterinary surgeons, appointed in 1841, reported that they had prepared a draft charter for the profession . . .

"The essential points contained in the draft charter are these: the whole of the present individuals who have obtained their diplomas from the colleges in London or Edinburgh, united into one body corporate, with power to sue and be sued, under the title of the President, Vice-President, Council and members of the Royal College of Veterinary Surgeons. The first President appointed by the Crown, who retains office until the meeting of the members, when a fresh election is to take place. The members to hold an annual meeting, to elect Council, which is to consist of 24 members, six of whom are to go out annually, but eligible for re-election. Council to appoint Vice-Presidents, to control and manage the affairs of the College generally; to make by-laws and regulations, and appoint fit and proper persons to examine those who wish to become future members of the body. Candidates for examination to have been educated at the Veterinary Schools of London or Edinburgh. . . .

"The Committee return their sincere thanks to the veterinary surgeons of the United Kingdom (and especially to those who in their different localities have assembled and united their exertions for the accomplishment of the objects in view) for the patience, discretion and unbounded confidence they have manifested. And to state that it has been their unceasing endeavour to carry out the objects for which they were elected in a spirit of good feeling and good temper—honestly, and with a spirit of cordiality towards the existing institutions. They would farther assure the members of the profession that it is their intention to still carry forward their labours in the same spirit; and supported, as they trust they will continue to be, by the individual exertions of every member of the body, never to cease from their exertions until they obtain for the veterinary surgeon that rank, station and professional education, which is justly his claim and his right to expect.

Signed on behalf of the Committee,
THOMAS TURNER, *Chairman.*
THOMAS WALTON MAYER, *Secretary.*
FRANCIS KING, jun., *Treasurer.*

# CLINICAL COMMUNICATIONS

## Case for Diagnosis

R. H. SMYTHE, M.R.C.V.S.
CAMBORNE

*Subject.*—Four months red Shorthorn heifer calf, in very good condition.

*History.*—On the morning of January 31st, 1942, she was given a pail of water in place of the usual milk. Accounts vary; some say that the water was cold, some that it was lukewarm, others that it was warm. Probably it was cold. The calf was perfectly normal at this time. Half an hour later it was found ill.

*Symptoms.*—Acute dyspnoea; blood, bright and red, was running from the mouth. The owner, considering the animal choked, sought my advice.

An equine stomach tube was passed down the oesophagus without difficulty. Following the operation, the calf broke free and ran into the yard. It was then observed that it was followed by a trail of blood which emerged from the vulva and anus. The tail and hinder portions of the body were soaked in blood. Death occurred during the night.

*Post-mortem Examination.*—Blood smear negative for anthrax. The thorax contained two pints of fresh blood and the abdomen about one-and-a-half pints. The bladder contained a quart of clean blood. The lungs were oedematous, spongy and serum-logged. The kidneys were congested and the tubules and ureters contained fresh blood. The spleen was normal. The bowels showed no enteritis nor was the abomasum inflamed, but a moderate quantity of fresh blood was present in the rectum.

During the *post-mortem* examination blood oozed freely from the nostrils.

All the muscular tissues appeared normal and there were no visible changes in the serous membranes. The thymus was persistent and appeared rather larger than normal at the age. The heart was firm and healthy with all the cavities empty.

*Remarks.*—The calf had never been outside the house and, although it shared a shed with two larger calves, it had its own compartment and was free from interference. Death was due to oedema of the lungs and in spite of internal haemorrhage, the blood vessels contained a large quantity of blood which flowed freely when they were cut.

Can any reader suggest the nature of the condition or its cause?

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## Operation for Milk Fistula

A. S. HARRIS, M.R.C.V.S.,
BARNARD CASTLE

I submit the following details of a very simple operation for two reasons; firstly, because of the lack of detail given to such operation in any textbooks I have read, and secondly, on account of the ridiculously high price of milch cows at present, a milk fistula taking at least £5 off the price of a newly calved cow.

According to most books on Veterinary Surgery milk fistulae are most commonly due to wounds of the teat exposing the teat canal, are rarely congenital and, if so, are the result of a supernumerary teat having been clipped off when the animal was a calf. In my experience exactly the reverse is true and congenital fistulae which have rarely been noticed until the animal is "springing" are very common, and are of two types: (*a*) those which communicate directly with the teat canal and (*b*) those which are usually situated higher up in the teat and are the outlet of a separate small "quarter." In each case the fistula is the result of a supernumerary teat having fused with the main teat in embryo. The operation is done when the cow is completely dry and if possible a minimum of six weeks before calving.

An assistant holds the cow's head and nose and this is usually all the restraint needed—an important point in advanced pregnancy—although in a nervous animal the kicking strap may be necessary. Procaine 1-2 c.c. is injected subcutaneously and intradermally just above the exit of the fistula, using a very fine hypodermic needle. A straight probe is passed in to the fistula and an incision in the skin, about a quarter of an inch long, is made parallel to the length of the teat and just above the exit, using a small straight-bladed scalpel. This incision is now continued around the exit including a small margin of skin and the end of the fistula dissected out and cut off about a quarter of an inch from the extremity. Two sutures draw the wound together and the owner is instructed to paint the wound with tincture of iodine once daily for four or five days.

The result is excellent, provided one makes certain that the cow is quite dry before operating.

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## Location of the Sexually Attractive Factor in the Bitch

FRED G. GREER, M.R.C.V.S.,
BRISTOL

A two-year-old Airedale bitch on which an ovaro-hysterectomy had been performed at the age of four months, recently came under treatment for incontinence of urine, which was ascribed to a vaginitis. This condition was judged to be a hormone deficiency, and accordingly was treated by daily injections of stilboestrol dipropionate, combined with oral administration of Bayer's "Unden." A marked simulated oestrus was induced after 36 hours, with resolution of the incontinence in seven or eight days.

The interesting feature of the case lay in the fact that the bitch was intensely attractive to dogs during the oestral phase, which appears to indicate that the origin of the sexually attractive factor must be located posteriorly to the os.

# REPORT

**[NEW SOUTH WALES:** Livestock Diseases Report for 1939-1940.]

The decision of the Chief of the Division of Animal Industry, Department of Agriculture, N.S.W., to issue an abridged annual report in the form of a circular memorandum in order that continuity of record may be maintained despite existing exigencies, is highly commendable, and the memorandum under review meets the purpose well.

Although interfered with by military duties the work of the Division was on a considerable scale. From the Research Institute alone eleven publications based on research conducted were issued during the year, and were published in *The Australian Veterinary Journal.* In addition over 16,000 specimens were examined at the laboratory. On the "field" side, routine inspections of large numbers of animals in transit in and out of the State and in quarantine were continued, as were the usual activities associated with the suppression of infectious diseases. Of these diseases it is particularly interesting to note the occurrence of an outbreak of *Brucella* infection in a herd of swine (type of organism not stated, but presumably the porcine strain) which was immediately suppressed by slaughter of all the pigs. Of further interest was the freedom from contagious bovine pleuro-pneumonia. This disease has been a menace to the State in the past. There were 37 outbreaks of anthrax and vaccination was adopted as a preventive measure. Blackleg occurred extensively. The drive against bovine tuberculosis was continued by area and individual clean-herd schemes. The incidence of the disease is relatively low but much reduction has been effected by these schemes in areas where they are being applied. One of the biggest undertakings of the Division is the destruction of tick and ked life by extensive dipping and hand dressing of animals. Most, if not all the cattle in the state and considerable numbers of sheep and horses were so dealt with during the year.

The livestock census at the end of March, 1939, was: sheep, 48,877,000; cattle, 2,812,000; horses, 548,355; pigs, 377,000.

W. K.

WEEKLY WISDOM

*The patient will get well just as fast without suffering, so why let him suffer?*—Dr. A. E. Hertzler.

## ABSTRACTS

**[A STUDY OF BREEDING RECORDS OF ONE LARGE HERD OF DAIRY CATTLE.** HOFSTAD, M. S. (1941.) *Cornell Vet.* **31**. 379-381.]

The usual practice of dairy breeders is to put cows to the bull at from 30 to 60 days after parturition, but from a study of the breeding records in a large dairy herd the author suggests that breeding efficiency is likely to be raised and the incidence of genital diseases lowered when the interval of rest between calving and the next breeding is extended to from 90 to 100 days. The data given by the author do not, however, support his contention for breeding in the restricted period between the 90th and 100th days. His figures actually indicate that percentage of abortions, metritis, dystocias, and retained placentae was about the same when service took place at from the 60th to the 100th day after calving, and that the incidence of genital disease was relatively lower in this service period than when service took place earlier than the 60th or later than the 100th day following calving. It thus seems that the best time for service was between 60 and 100 days after parturition.

From the breeding records of this herd the author also analyses the results of removal of the corpus luteum in each of 179 cows. Only about one-third of the cows treated in this way for sterility due to absence of oestrus or other causes conceived within one month after enucleation of the corpus luteum. Sixty-one per cent. of the enucleations were followed by oestrus within two to nine days. Removals of corpora lutea were commonly followed by haemorrhage and by adhesions round the ovary, and the author mentions that this faut has led some workers in bovine sterility to question the advisability of manual manipulation of the ovaries, apart from massage. He suggests the use of gonadotrophic hormones as an alternative treatment, and the more careful observation of cows for oestrus.

N. J. S.

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**[EQUINE DYSTOCIA WITH TRANSVERSE BICORNUAL OBLIQUE PRESENTATION.** FINCHER, M. G., and KRILL, W. R. (1941.) *Cornell Vet.* **31**. 35-42.]

Six cases are described, and illustrated by photographs, of a rare and hopeless form of dystocia in the mare. In this condition the foetus lies far forward with its head and fore limbs usually in one horn and hind limbs extended to the apex of the other. It can be palpated only with difficulty by an operator with very long arms, and cannot, therefore, be manipulated effectively. Three of the mares were destroyed as interference was considered hopeless; in the remaining three cases, total embryotomy was performed. In two of these cases the mares died and at *post-mortem* examination the womb was found to be torn: this accident had probably occurred during embryotomy which was very difficult to perform. The remaining mare was in a state of toxaemia when seen and died of septic metritis.

All the mares were over eight years of age and deep-bodied, so that anatomical changes in the viscera may have been a factor provoking the abnormal position of the foetus. The authors also consider that possibly the endometrium of the uterus had been injured at a previous pregnancy, with the result that the mucosa of the body of the uterus possessed less attraction than the cornua for the placenta, resulting in the abnormal presentation.

A case where embryotomy was successfully performed by Anderson is described in detail.

J. B. T.

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**[ISOLATION AND CHARACTERISTICS OF BACTERIOPHAGES FOR STAPHYLOCOCCI OF BOVINE MASTITIS.** SLANETZ, L. W., and JAWETZ, E. (1941.) *J. Bacteriol.* **41**. 447-455.]

The authors found that staphylococcal bacteriophages could be isolated from a proportion of cows suffering from chronic staphylococcal mastitis. Various tests showed that these phages were very similar to those isolated from human sources; bovine phage lysed staphylococci of human origin and *vice versa*.

Some tests in kittens indicated that phage reduced the severity of infection, following the intraperitoneal inoculation of staphylococci. The authors state that the effect of inoculating phage into the udders of cows recently infected with staphylococci should be studied, but they do not believe it will be of great therapeutic value.

[Other workers have reported favourably on the phage treatment of mastitis in heifers with non-functioning udders, but in lactating animals it was of little value (*Abst. Vet. Rec.* **53**. 764).]

J. F.

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**[A NOTE ON THE FAILURE OF PHENOTHIAZINE AS AN ANTHELMINTIC AGAINST *STRONGYLOIDES PAPILLOSUS* OF SHEEP.** KAUZAL, G. P. (1941.) *J. Coun. Sci. and Industr. Res.* **14** (3). 218-219.]

Kauzal confirms the observations of other investigators that phenothiazine is wholly ineffective as an anthelmintic against *Strongyloides papillosus*. In his experiments the drug was administered to six out of 12 lambs, 4-5 months old, each of which had been artificially infected with 7,500 nematode larvae about a month previously. The rate of dosage was 0·6 gm. phenothiazine per kilo. bodyweight. During the two days following treatment the eggs of *S. papillosus* passed in the faeces completely failed to develop, due apparently to the presence of the drug in relatively high concentrations; there was, however, no reduction in the number of eggs passed during this period. After the two-day period had elapsed, increasing numbers of larvae hatching from eggs excreted in the faeces appeared until they equalled those developing from control animals. Kauzal notes that parasites, such as the liver fluke and trichinella larvae, which inhabit the tissues, are not affected by phenothiazine despite the fact that the drug and certain of its derivatives are partly absorbed into the blood stream. He comments that *S. papillosus* lives embedded in mucus on the intestinal mucosa and may thus be protected from contact with the drug administered orally.

J. N. O.

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**[SURVIVAL AND DEVELOPMENT AT LOW TEMPERATURES OF EGGS AND PRE-INFECTIVE LARVAE OF HORSE STRONGYLES.** LUCKER, J. T. (1941.) *J. Agric. Res.*, Washington, D.C. **63**. 193-218.]

The writer's observations were made under natural conditions, but desiccation, excess of moisture and direct sunlight were eliminated or minimised and consequently, temperature was the principal factor considered. Unembryonated eggs were found to be more resistant to low temperatures than embryonated eggs and 94-100 per cent. of unembryonated eggs were killed in 47-56 days in faeces kept at from 14-21° F. Pre-infective larvae in all stages were far more susceptible to sub-freezing temperatures than the unembryonated eggs. More than 90 per cent. of pre-infective larvae, principally in the first and early second stages of development, were killed in 1·2-4 days in faeces at 14-21° F. Larvae that had just reached the infective stage were readily killed by subfreezing temperatures. First- and second-stage larvae were found more susceptible to excessive moisture than third-stage larvae.

J. S. S.

## THE NATIONAL STUD

In a recently issued White Paper giving the balance sheets of commercial services carried on by Government Departments it is stated that the National Stud, which is still being carried on at Tully, County Kildare, showed a net loss in 1940 of £5,579.

The National Stud was established in 1916 as the result of the gift of his valuable stud to the nation by the late Lord Wavertree, and in spite of a loss in 1940 and some previous years it still shows a total net profit of £86,498. It is now being used for breeding the highest class of thoroughbreds with a view to benefiting the breeding of bloodstock generally.

The effect of the war on prices is shown by the fact that six horses sold in 1940 averaged £367 each, compared with averages of £835 for 16 horses in 1939, £1,127 for 12 horses in 1938, £1,740 for 12 horses in 1937, and £1,684 for nine horses in 1936. The receipts by the Ministry of Agriculture from the one-third share of stakes won by certain horses leased for racing purposes were only £25 in 1940, compared with £1,888 in the previous year.

## IN PARLIAMENT

### The Food Production Campaign

In the course of a statement on the above to the House on Wednesday of last week, Mr. R. S. Hudson, Minister of Agriculture, said that the harvest of 1942 might well be a critical factor, not only in the history of this country, but in the history of the world. It must be remembered that we were a nation of small farmers, many of whom were small dairy farmers or men who were dependent on pigs and poultry, and whose mainstay had now disappeared. The Ministry had perforce to compel many farmers, in the national interest, to grow crops which were economically ill-suited to the farm on which they were grown.

When this year's ploughing-up campaign was finished we should have, approximately, 6,000,000 acres more under the plough than before the war; the average wheat acreage was up by one-third, and whereas in pre-war time a great deal of the wheat produced at home went to feed livestock, now all but a negligible proportion went directly to the feeding of the human population. There was also a great increase in potato acreage and vegetable crops. At the same time they had, of course, the problem of growing millions of tons of additional feeding-stuffs for livestock, to make up for absent imports. Some things had had to go, and inevitably the pig, poultry and sheep population had somewhat declined. They were doing their best to see that the milk supply was maintained. They had now reached the limit of tillage acreage that could be managed with such supplies of fertilisers, machinery and manpower as were in sight, and from now on they had to concentrate on improving farm management and getting something more out of existing arable and remaining grassland.

The Minister concluded with a brief review of the technical measures being taken to deal with specific problems, embodying the statement that "the U.S.A. have again shown their readiness to help by sending over Mr. Mingle, a veterinary expert, to assist us in dealing with the problem of contagious abortion in cattle," and references to the Committees now sitting under Earl De La Warr on hill sheep, with special reference to the serious deterioration in recent years of hill pastures and the sheep diseases associated therewith.

In the subsequent debate an isolated reference to the control of animal disease as a factor in the situation came from Mr. Price (Forest of Dean), in the words: "I believe that, as with human beings, many of our cattle diseases have been tackled too much from the point of view of cure, and not enough from the point of view of prevention. A balanced diet, with proper vitamin and mineral contents, will do much to raise the standard of health in our cattle. However, I do not disregard the necessity for dealing with diseases when cattle have them. For some months I have been pressing the Minister to get on with the national scheme for dealing with the four important herd diseases—contagious abortion, mastitis, sterility and Johne's disease. But I recognise need for caution. I made an experiment the other day with a blood test for Johne's disease; and, out of a herd of 15 heifers which I tested, two which passed the test went down with the disease in a month, although they were supposed to be free from it. It seems to me that in this matter of preventive injections and injections for blood-testing we have a long way to go; but I hope that the Minister will not lose heart, and that he will impress upon the veterinary profession the great importance of going on with the research."

* * * * *

The following are among the questions and answers recently recorded in the House of Commons:—

### Agriculture: Veterinary Inspectorate (Women)

Colonel Carver asked the Minister of Agriculture whether, in view of the nation's urgent need of all available man-power, he will consider in future utilising the services of qualified women veterinary surgeons as veterinary inspectors, so as to avoid the necessity of employing men of military age to fill such appointments?

Mr. Hudson: I must remind my hon. Friend that veterinary surgeons of all ages, whether employed in the Ministry or elsewhere, are reserved from service in H.M. Forces. The admission of qualified women veterinary surgeons to the Ministry's veterinary inspectorate is at present under consideration, but in view of the large number of vacancies in this inspectorate their admission would not avoid the necessity of employing male veterinary surgeons.

## NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

### Diary of Events

Apr. 1st.—R.C.V.S. Annual Fees due.
Apr. 1st.—Meeting of the Editorial Committee, N.V.M.A., 36, Gordon Square, W.C.1, 3 p.m. Abstracts subcommittee, 2.30 p.m.
Apr. 1st.—58th Annual General Meeting of the Western Counties Division, N.V.M.A., at Exeter, 2 p.m.
Apr. 2nd.—Annual General Meeting of the Midland Counties Division, N.V.M.A., at Birmingham, 2 p.m.
Apr. 2nd.—Meeting of the Central Veterinary Society, Conway Hall, W.C.1, 2.30 p.m.
Apr. 11th.—Annual General Meeting of the Association of Veterinary Inspectors at the Imperial Hotel, Birmingham, 2 p.m.
Apr. 15th.—Meeting of the Section of Comparative Medicine, Royal Society of Medicine, at 1, Wimpole Street, W.1, 2.15 for 2.30 p.m.
Apr. 16th.—R.C.V.S. Committee Meetings, Hotel Russell, London.
Apr. 17th.—R.C.V.S. Committee and Council Meetings, Hotel Russell, London.
May 11th.—R.C.V.S. Animal Management Examination begins.

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### Death of Major George W. Dunkin

We have to announce, with deep regret, the death, following the effects of cerebral haemorrhage, of Major George William Dunkin, M.R.C.V.S., D.V.H., Director of the Agricultural Research Council's Field Station at Compton, nr. Newbury, Berks. We hope to publish an extended memoir in our next issue.

His name has become most familiar to the veterinary profession and to the public on account of the classic researches carried out by him, with the late Sir Patrick Laidlaw, into canine distemper, its cause and mode of prevention. Since then, perhaps his most important work has been that on Johne's disease.

Major Dunkin, moreover, had played a leading part in the affairs of the veterinary profession for many years. We need only mention now that he had been a member of the Council of the Royal College of Veterinary Surgeons since 1929 and was Chairman of the Examination Committee. For several years, until his duties at Compton became too heavy, he undertook a large amount of work on behalf of the N.V.M.A.; notably, he occupied the chair of the Editorial Committee, during a long period of service, in 1929, and was Chairman of the N.V.M.A. Special Committee on Small Animal Euthanasia which reported in 1937. He had also been President of the Section of Comparative Medicine, Royal Society of Medicine, 1936-37.

A few years after the termination of his army career—he commanded the 20th Veterinary Hospital, E.E.F., 1917-19—Major Dunkin followed Professor Buxton as Superintendent of the Medical Research Council's Field Laboratories at Mill Hill in 1924, when the latter was translated to Cambridge. There, besides his work on distemper and Johne's disease, perhaps his most outstanding achievement was to bring conspicuously to the notice of medical research workers the part which the members of the veterinary profession are able to play in the conduct of research, and to establish friendly relations with them.

It will be recalled that last year the Council of the Royal College of Veterinary Surgeons marked its recognition of the outstanding services rendered by Major Dunkin in the advancement of veterinary science by honouring him with the award of the John Henry Steel Memorial Gold Medal.

We extend our deepest sympathy to the widow.

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### R.C.V.S. OBITUARY

Dunkin, George William, Director, Agricultural Research Council Field Station, Compton, Berks. Graduated London, December 19th, 1908. Died March 21st, 1942; aged 55 years.

Graves, Wright, Dunstall House, Cottenham, Cambs. Graduated London, April 4th, 1876. Died March 13th, 1942; aged 86 years.

Wilson, Peter, 48, Albany Drive, Lanark. Graduated Edinburgh, December 22nd, 1893. Died March 16th, 1942; aged 69 years.

The death of Mr. Graves, which took place at the Evelyn Nursing Home, Cambridge, to which he had been taken for treatment of a femoral fracture caused by a fall on his 86th birthday, removes one of the senior members of the profession from the Register. He was the father of Dr. T. C. Graves, M.D., B.SC., F.R.C.S., M.R.C.V.S., Medical Superintendent of the Rubery Hill Asylum, near Birmingham.

Mr. Peter Wilson was a member of the Council of the Royal College of Veterinary Surgeons from 1917-1921 and was a past president of the Scottish Metropolitan Division, N.V.M.A.

### Peter Wilson

*(An Appreciation)*

Those who had the privilege of knowing Mr. Peter Wilson, of Lanark, recognised that he was a veterinary practitioner possessed of great clinical ability. One had only to hear Mr. Wilson describe a case to realise his complete grasp of the essentials of veterinary medicine. In comparatively few words, spoken slowly and quite quietly, he could make his audience visualise the case in a way that made it come to life in their mind's eye. Similarly his written descriptions of cases were models of clear concise diction, that were a pleasure to read.

Throughout his life Mr. Wilson gave an abiding impression of integrity. To hear him give evidence in a court of law was an education in professional conduct. The court very soon appreciated that here was a man whose sole endeavour was to give an unbiased opinion designed to guide the court to an equitable judgment.

Throughout his professional life he kept abreast of scientific developments, and it was typical of him that when over 65 years of age he attended a refresher course for practitioners.

He served, for a period of years, as an elected governor of the Royal (Dick) Veterinary College and he continued to take an interest in the welfare of that College to the end of his days. He made several valuable presentations of books to the College Library, and contributed much material gathered in his practice that was invaluable to the teaching staff and students.

It is on men of his ability and character that the strength of the veterinary profession must rest secure. His memory and example will long survive in the minds of those who esteem scientific skill and professional probity. G. F. B.

### The Late Mr. John M. McMaster, M.R.C.V.S.

Many members of the veterinary profession will have learned with deep regret, from your issue of March 14th, of the sudden death, on the 5th inst., of Mr. John M. McMaster, Ardgour, Stoneykirk. For a few years Mr. McMaster did not enjoy robust health but his death came as a great shock to his many friends in the Rhinns district of Wigtownshire, where he carried on practice from 1897.

Mr. McMaster was born in May, 1871, at South Milmain, Stoneykirk, where his forebears had been prominent farmers for many generations. After graduating in Edinburgh in 1894 he acted as Assistant in various parts of Scotland and England, and in 1897 he commenced practice on his own account in his native district, very soon building up an extensive practice in one of the best dairying districts in Scotland. In 1940, to relieve him of the increasing pressure of work, he took in a young partner. For many years, prior to 1926, Mr. McMaster was a Veterinary Inspector of the local authority, and more recently was a local Veterinary Inspector of the Ministry of Agriculture and Fisheries. He also acted as a veterinary referee in connection with the Horse Breeding Act, for the Department of Agriculture for Scotland.

By constant attention to his practice and by his ability as a veterinarian, Mr. McMaster earned the highest esteem of the farming community; and because of his jovial and happy disposition and his sympathetic nature he gained a higher degree of popularity than is accorded to most. Many of the younger members of the profession will remember with gratitude the help, encouragement and advice which he gave to them.

Mr. McMaster served with H.M. Forces from October, 1914, until the termination of hostilities. For part of the time he was Veterinary Officer with the Scottish Horse. After demobilisation he did not cease to be interested in those who had served during the war, but took a prominent part in the affairs of the local branch of the British Legion. Not content with the services he had rendered during the last war, he joined the L.D.V. as soon as it was formed in 1940.

It is natural that, being the son of a farmer, he should have a desire to have a farm of his own. He satisfied this desire by taking over, in 1913, the tenancy, and in 1922, the ownership, of Altogue, Stoneykirk, where he carried on a dairy farm. He was amongst the first in the county to have his herd of Ayrshire cattle attested.

Mr. McMaster is survived by his widow, four daughters—two of whom are serving with the W.A.A.F.—and one son, and deep sympathy is accorded them in their tragic loss.

The funeral took place on Sunday, the 8th inst., to Stoneykirk Churchyard, and despite the inclemency of the weather a very large number of mourners attended. J. McQ.

## Roll of Honour

### Captain T. V. Somerville, O.B.E., D.S.O., M.C. with bar

Captain Thomas Victor Somerville, R.A.M.C., medical officer of the 3rd Hussars, whose death on active service in the Middle East is reported, spent his professional life almost wholly in the practice of human medicine and, as will be seen below, acquitted himself with great gallantry in the military sphere. He was also a member of the veterinary profession and we reproduce the following account of his career contributed by "S. W. S." to *The British Medical Journal* of March 7th.

"Great regret will be felt at the death of Captain Thomas Victor Somerville, R.A.M.C., medical officer of the 3rd Hussars, while on active service in the Middle East. On June 1st last he was reported missing, though believed to be alive and well 'in enemy territory'; this report was repeated in September. Now he is stated to have died on November 23rd. Somerville was 54. He was born of Scottish parents in Ceylon, where his father was a planter. His mother was a sister of the late Sir James Yuill. Somerville was sent home to be educated at Framlingham. Thereafter he trained and qualified M.R.C.V.S. Lond., proceeding immediately to study medicine at the London Hospital in order to obtain the double qualification—in medicine as well as in veterinary surgery—to prepare himself the better for future work abroad. He obtained the M.R.C.S., L.R.C.P. in 1914. After taking a course at the London School of Tropical Medicine, Somerville was appointed house-physician and house-surgeon at the Royal Sussex Hospital, Hastings. When there were rumours of war in 1914 he resigned his appointment and joined the Army—the day before the outbreak of war—proceeding to France with the Expeditionary Force. At first he was attached to the Field Artillery, being transferred later to the 2nd Battalion the Highland Light Infantry. After the armistice Somerville went to Russia with the 1918 Expeditionary Force, returning home with this Force after nine months' service there. In 1916 he was awarded the M.C. for an act of conspicuous gallantry near Ypres, and in 1918 a bar to the M.C. for many acts of courage and bravery while he stayed behind during the March retreat to tend the wounded. In November, 1919, he was awarded the O.B.E. (Military Division). For a year he held the appointment as civil surgeon at Baghdad, then came back to England, settling in general practice at Monkseaton, near Newcastle. About fifteen years ago he came to Bournemouth, continuing in general practice in the Winton area there. Soon after the outbreak of the present war Somerville, although over 50, volunteered again, and saw active service in Libya. On May 6th last he was gazetted as having been mentioned in dispatches for distinguished services in the Middle East. In the same number of the *London Gazette* (dated May 6th) was the notification of the award to him of the D.S.O. 'in recognition of gallant and distinguished services in the Middle East.' In the *Listener* of May 1st, 1941, is the record of a broadcast, which many will remember having heard, made by a B.B.C. observer in the Middle East, in which he described incidents of astonishing bravery on the part of Captain Somerville. One of these he narrates thus: 'After Sidi Barrani, during the advance towards Sollum, Somerville was to be seen driving about, under intense fire, sitting on the top of his 'dingo' with shells bursting all round and machine-gun bullets whistling past. Why he wasn't killed I don't know. Backwards and forwards he went fetching and tending his wounded men till all had been seen to.' Thomas Somerville was of a quiet, retiring disposition, never strong physically, and of gentle temperament; a man of deeds rather than words; brave as a lion; there was none braver or more gallant. Much sympathy will be felt by a large circle of friends with his wife and married daughter, who, after waiting in dreadful suspense for so many months, have now to mourn his loss."

## ROYAL ARMY VETERINARY CORPS

The following announcement is made in the issue of *The London Gazette* dated March 13th, 1942: "Col. J. O. Andrews, D.S.O., at his own request, reverts to the rank of Capt. whilst employed during the present emergency. April 21st, 1941."

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## THE NUTRITION SOCIETY

The second scientific meeting of the above Society was held on Saturday, February 28th, 1942, at the London School of Hygiene and Tropical Medicine, and took the form of a whole-day Conference on "Food Production and Distribution in Relation to Nutritional Needs." There was a large and representative attendance, and the following workers in the veterinary field were among those present: Dr. Ruth Allcroft, Dr. J. T. Edwards, Mr. R. E. Glover, Dr. H. H. Green, Miss R. McAnnaly, Mr. R. I. McDougall, Mr. C. A. McGoughey, Professor Wm. C. Miller, Mr. W. R. Muir, Mr. D. L. Robarts, Dr. G. Slavin, Dr. A. W. Stableforth, Dr. W. R. Wooldridge and Mr. A. N. Worden. The proceedings were divided into four sections, each consisting of a paper and discussion on a different aspect of the main theme. A summary of the contributions will be published in brochure form in due course, but for the benefit of readers we are publishing brief summaries of the four discussions, all of which are of direct interest to the veterinarian.

(1) Sir John Orr presented the first paper, entitled "The Agricultural Implications of a Food Policy Based on Nutritional Needs." He pointed out that many different sciences were united in the subject of nutrition, in which there had been tremendous advances during the last 25 years. The "Newer Knowledge of Nutrition," as MacCollum had termed it, had resulted in the creation of new dietary standards, and it was necessary to increase, as was being done in the U.S.A., the consumption of protective foods. At the end of the war the food shortage was likely to be acute, and it was desirable that a sound food policy should form part of post-war reconstruction. If a world-wide food policy were adopted, it seemed unlikely that wheat would be grown in Britain on an appreciable scale, and our agriculture was likely to become similar to that of Denmark. It was necessary that distribution centres be developed, in order that there could be an equal consumption of protective foods during winter and summer, and research into the growing of foods rich in vitamins and into the preservation of foodstuffs was highly desirable.

Dr. T. F. Macrae opened the discussion on the above paper, and stressed the fact that this country must become more self-supporting. It was desirable that bread should be of optimum nutritional value, *i.e.*, of the type of the present National wheatmeal loaf, and there was no doubt that Canadian wheats were superior to English for breadmaking. We should therefore give priority to milk and vegetables, and in the case of the latter it was important to cut down the time which elapsed between gathering and consumption; this would be assisted by the continuation of the allotment schemes. Dr. Macrae stressed the importance of palatability, and said that we should remember that such foods as onions, eggs and meat were of high menu value; at present we were short of "flavour." Dr. Kodicek gave some interesting data on the nicotinic acid content of human dietaries, and showed the dangerously low levels of this vitamin which were present in some war-time diets, notably those in which white bread was included.

(2) Dr. N. C. Wright dealt with the "Rival Claims of Animals and Man for Food," providing a series of statistics relating to the human and animal populations of the country, and to the amount of foods consumed by each. Before the war, some three million acres had been devoted to the growing of crops for direct human consumption, whereas about 27 million acres had been used for livestock feeding. In pre-war days, animals and man were complementary rather than competitive, and the rôle of livestock had been that of converting coarse foods into ones suitable for human consumption and of forming humus; mixed husbandry had tremendous advantages over other types. In war-time, however, imports had been curtailed, and human claims must receive priority. This was true also on the home front, where a reorientation of policy had been necessary, and where wheat and potato crops had been grown at the expense of grassland. The average efficiency of conversion of foodstuffs by animals was of a low order, not over 25 per cent., and whereas one acre could provide six million calories as potatoes, it could not provide more than about one-fifth of a million calories as meat. The present system of agriculture was more balanced than that of pre-war days, but unfortunately this return to a balanced agriculture had coincided with a shortage in animal feeding stuffs. Dr. B. S. Platt, who opened the discussion, drew attention to the Imperial Bureau of Animal Nutrition's publication on the efficiency of animals as food converters, and to the fact that the importation of concentrates into this country resulted in competition between animals and man in others, tending to upset the balance of agriculture in other parts of the world. Dr. Yates warned the meeting that dairy herds must not be cut down too drastically owing to the slow rate of reproduction of the species and the consequent difficulties of subsequent rebuilding. Dr. Wooldridge commented on the fact that the conclusions drawn by Dr. Wright from his statistical examinations would be materially altered if he allowed for the fact that the efficiency of agricultural production in this country could be greatly increased. Particularly was this so with those animals which are producers of food for human beings. It was an unfortunate fact that preventive medicine on the farm had scarcely begun, yet much could be achieved by the introduction of a bold progressive national policy directed to maintain and improve the health of farmstock, to control the incidence of animal disease and to increase the production of milk, dairy products, eggs and meat. To give figures concerned with just three diseases of dairy cattle—mastitis, contagious abortion and sterility—a recent report by the National Veterinary Medical Association computed the loss of liquid milk from these diseases alone to be 198,000,000 gallons per annum. This represented 83,000 tons of protein, sugar and minerals and over 31,000 tons of butter fat.

*(To be continued.)*

# CORRESPONDENCE

Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.

*The views expressed in letters addressed to the Editor represent the personal view of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.*

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## OUR WAR EFFORT

To the Editor of the Veterinary Record

Sir,—I have read your Editorial in *The Veterinary Record* of March 14th and, at the risk of seeming to repeat what has been already so clearly stated, I should like to make a few observations.

Although there are members of our profession who do not approve the Government's reservation of veterinary surgeons, as a whole I believe we are agreed that the measure is both wise and necessary. Our quarrel with the Government is that little or no use is being made of a number of these trained men who have been carefully set aside as a defence and aid to the home supplies of our country in war-time. Very many veterinary practitioners are doing little or nothing within their profession to aid the war effort, while some are taxed to the utmost to fulfil the duties imposed upon them. Their enforced uselessness exacerbates the nerves and tempers of those men and women who are denied the right to serve their country in her need, while those who are over-worked cannot give of their best.

I yield to none in my dislike of regimentation, but surely any reasonable body of men will welcome a dictator who would correct this abominable waste at a time when to waste power is to lose the war.

The only excuse for reserving a body of men and women is that by reason of their special training they are necessary to the war effort. If this special training is not used the authorities are imitating that foolish servant who buried his talent, and it is probable that they will receive condemnation when their country demands an account of their stewardship.

Yours faithfully,

101, Bromley Road, Shortlands, Kent. S. F. J. Hodgman.

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## "SECOND THOUGHTS"

To the Editor of the Veterinary Record

Sir,—Under the designation "Second Thoughts" the opportunity to correct or to enlarge on previous statements is afforded members of the "Brains Trust" on the B.B.C. An extension of this practice to other spheres should be beneficial.

The public has already been warned to expect a serious milk

shortage next winter. The farmer has been urged to increase his present yield—one such adviser going to the length of advocating the wholesale service of heifers, ignoring that a not inconsiderable number may not have attained sexual maturity, let alone being able to support the weight of the average stock bull. The possibility of infertility is likewise disregarded, either at this time, or as a natural result of too-early mating.

"Second Thoughts" should demonstrate that the first essential is to take all possible steps to maintain the yield which has already been attained, and to minimise the losses from those diseases which, war or no war, yearly cause a decrease.

The prevention of disease has been overlooked by every political speaker. The greatest praise is due to those members of the Survey Committee who, both in these columns and in those of the agricultural Press, have pointed out that the veterinary profession is only waiting to have its services utilised to achieve this end.

The scheme which has been envisaged by these untiring and unselfish members of our profession is so vast, and of such vital national importance, that it must not be allowed to fail. It cannot be launched on the very uncertain keel of a mere nod of State benediction. It must have, from the start, the fullest assistance and co-operation from the already existing State Veterinary Service as exemplified in the Animal Health Branch of the Ministry of Agriculture and Fisheries. The present policy of: "Will you do this," unless translated into: "You have got to do it," if persisted in, is going gravely to handicap the nation's war effort. For a similar reason this scheme must be one of compulsion. There will be opposition without a doubt, as there has been to the "ploughing campaign," but those farmers who are capable of seeing further than their noses are beginning to realise that no more effective measure for cleaning up pastures has been instituted. The fruits will be reduced, however, if at the same time the farmer does not clean up his stock.

The Survey Scheme, developed on a national scale, will prove the finest achievement in our annals, for in addition to decreasing at once the losses from disease in our farm livestock, it should make unemployment, already present in our ranks, a thing of the past for some years to come. I, for one, do not want to see young graduates having literally to beg for their daily bread, and my opposition to the scheme in its present form is based on the grounds that it is proposed to run it as a more or less private concern between the practitioner and his own clients.

As I have pointed out before, in a scheme of these proportions no amount of individual enthusiasm is going to ensure its success other than in a purely localised sense. Legislation is essential to facilitate effective control over these diseases. In addition, dissemination of knowledge is indicated. Already one has only to pick up any agricultural paper to note that insemination is being seized upon and urged as a panacea for infertility in cattle, irrespective of any veterinary examination of the animal, or animals, beforehand. It has even been suggested that this could be carried out by laymen stationed at various depots, where, one presumes, a stock of semen would be kept in glass jars, duly labelled for the appropriate breed. It is satisfactory to note that one member of the Survey Committee, and a personal friend of mine, was on his toes ready for such a suggestion, and has already given a reasoned and sensible reply.

The agricultural community is not only woefully ignorant of what the veterinary profession can do, if only given the opportunity, but it seems yet more ignorant of the value of veterinary advice.

It has been suggested in these columns that the members of the Survey Committee who are endeavouring to make this scheme more widely known, should be given a high honour. Knowing all of them, I think that they would sooner see the success of their efforts and the advancement of the profession.

Yours faithfully,

"Rothiemurchus," J. F. D. Tutt.
St. Cross,
Winchester.

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## THE PROFESSION AND THE LIVESTOCK INDUSTRY

To the Editor of the Veterinary Record

Sir,—It is a long time since I read such a well-thought-out summing up of the livestock position and its relation to the veterinary profession as that given by Mr. W. G. Wragg in your issue of March 14th. Before any good main advance in our position in regard to the health of livestock can be made there must be an estimation of the raw material to be dealt with and supervised and plans of a wide and all-embracing character made to deal with the position. It is no use fiddling about with bits and pieces here and there, a comprehensive plan and scheme should be inaugurated to deal with the whole matter. And the first real progressive step will be not so much to treat ailing and sick animals as to produce a race of sound, healthy stock of good stamina and constitution, in fact to grade and build up animals fit for experts to revel in. When this has been done or while it is being effected, measures must be taken to see that this race of prime stock should have quarters fit to live in where the best facilities can exist to deal with the prevention of disease and the carrying out of effective hygiene.

As regards the supervising of the health of the animals in a rational way the best plan would seem to be to map out many and suitable areas and to appoint district veterinary surgeons under a controlling body, to keep these areas well informed and up-to-date in all matters concerning and affecting the health of stock. The ignorance of the general public as to the duties and responsibilities of veterinary surgeons is appalling and in few cases is it displayed more prominently than when one goes to claim exemption for one of our female staff. As Mr. Wragg suggests, there is absolute necessity for propaganda and publicity as regards our relation to livestock.

Propinquity and "according to plan" have brought the Germans some success, but opposing versatility, cohesion and well-thought-out co-operation should eventually bring them to disaster.

Yours sincerely,

G. Mayall.

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## WEYBRIDGE TUBERCULIN: A CORRECTION

To the Editor of the Veterinary Record

Sir,—In your issue of March 14th, 1942, in the report of the discussion on Weybridge Tuberculin, there appear at the head of column one on page 113, the following remarks attributed to me:—

> "There was, however, no such restriction on the occasions when practitioners chose to carry out tests in their private capacity and with other than Weybridge tuberculin. . . ."

My actual words were: "There was, however, no such restriction on the occasions when practitioners chose to carry out tests in their private capacity *with* Weybridge tuberculin"—a very different matter.

Yours faithfully,

28, Lichfield Street, H. W. Steele-Bodger.
Tamworth,
Staffordshire.
*March 19th*, 1942.

## DISEASES OF ANIMALS ACTS, 1894 to 1937, and AGRICULTURE ACT, 1937 (PART IV)

**Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases**

| Period | Anthrax | Foot-and-mouth- | Parasitic Mange* | Sheep Scab | Swine Fever |
|---|---|---|---|---|---|
| Feb. 1st to 15th, 1942 | 16 | 3 | 5 | 15 | 19 |
| Corresponding period in— | | | | | |
| 1941 ... | 22 | 20 | 2 | 18 | 127 |
| 1940 ... | 26 | 2 | 2 | 13 | 185 |
| 1939 ... | 47 | 3 | 3 | 24 | 53 |
| Total Jan: 1st to Feb. 15, 1942 | 46 | 3 | 8 | 62 | 61 |
| Corresponding period in— | | | | | |
| 1941 ... | 74 | 71 | 4 | 63 | 377 |
| 1940 ... | 82 | 7 | 7 | 49 | 527 |
| 1939 ... | 139 | 25 | 11 | 107 | 159 |

Note.—The figures for the current year are approximate only.
* Excluding outbreaks in Army Horses.